

Title (en)
THERMAL MANAGEMENT SYSTEM AND CONTROL METHOD FOR SAME

Title (de)
WÄRMEVERWALTUNGSSYSTEM UND STEUERUNGSVERFAHREN DAFÜR

Title (fr)
SYSTÈME DE GESTION THERMIQUE ET PROCÉDÉ DE COMMANDE ASSOCIÉ

Publication
EP 4292839 A1 20231220 (EN)

Application
EP 22752126 A 20220125

Priority
• CN 202110182465 A 20210210
• CN 2022073722 W 20220125

Abstract (en)
A thermal management system, comprising a primary system and a secondary system; the primary system comprises a primary refrigerant system and a primary cooling liquid system; the primary system comprises a first heat exchanger (11); the first heat exchanger (11) comprises a first heat exchange portion (111) and a second heat exchange portion (112); the primary refrigerant system comprises a first compressor (21), a second heat exchanger (12), and a first throttling device (31); the secondary system comprises a secondary refrigerant system and a secondary cooling liquid system; the secondary system comprises a third heat exchanger (13); the third heat exchanger (13) comprises a third heat exchange portion (131) and a fourth heat exchange portion (132); the secondary refrigerant system comprises a second compressor (22), a fourth heat exchanger (14), and a second throttling device (32); the thermal management system comprises a battery heat exchange assembly (41); the thermal management system comprises a quick battery heat dissipation mode; in the quick battery heat dissipation mode, the battery heat exchange assembly (41) is communicated with the second heat exchange portion (112) and the fourth heat exchange portion (132). Also disclosed is a control method for a thermal management system. In the quick battery heat dissipation mode, the cooling liquid flowing through the second heat exchange portion (112) and the fourth heat exchange portion (132) can absorb battery heat, so that the battery heat can be quickly dissipated.

IPC 8 full level
B60H 1/00 (2006.01); **H01M 10/613** (2014.01)

CPC (source: CN EP US)
B60H 1/00278 (2013.01 - CN EP US); **B60H 1/00392** (2013.01 - CN EP); **B60H 1/3204** (2013.01 - CN); **B60H 1/32281** (2019.05 - EP US); **B60H 1/323** (2013.01 - EP); **H01M 10/613** (2015.04 - CN EP US); **H01M 10/625** (2015.04 - CN EP US); **H01M 10/63** (2015.04 - EP US); **H01M 10/6568** (2015.04 - EP US); **H01M 10/6569** (2015.04 - EP US); **H01M 10/663** (2015.04 - CN EP); **B60H 2001/00307** (2013.01 - CN EP); **B60H 2001/00928** (2013.01 - EP US); **H01M 2220/20** (2013.01 - CN EP); **Y02E 60/10** (2013.01 - EP); **Y02T 10/70** (2013.01 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4292839 A1 20231220; **EP 4292839 A4 20240821**; CN 113173048 A 20210727; US 2023382181 A1 20231130; WO 2022170965 A1 20220818

DOCDB simple family (application)
EP 22752126 A 20220125; CN 202110182465 A 20210210; CN 2022073722 W 20220125; US 202318232801 A 20230810